FIG. 1

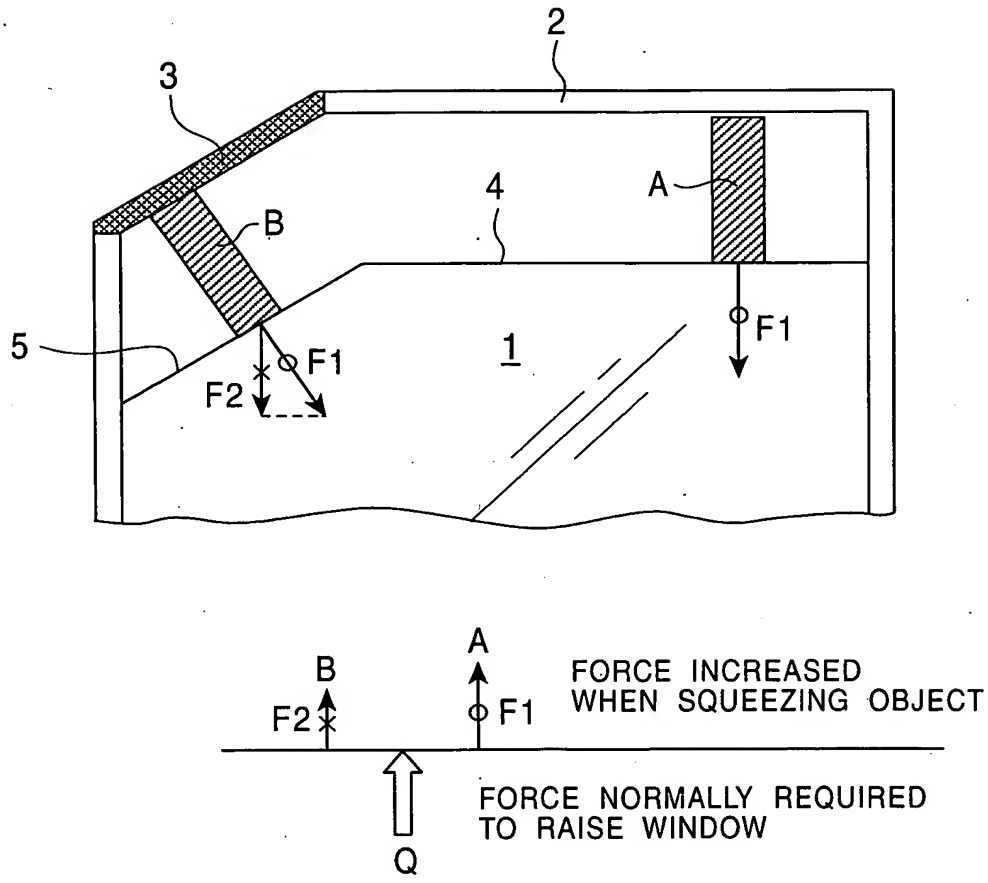
2
3
4
A
B
F1
5
F1
F2
1
A
B
F2
F1
FORCE INCREASED
WHEN SQUEEZING OBJECT
FORCE NORMALLY REQUIRED
TO RAISE WINDOW
Q

FIG. 2

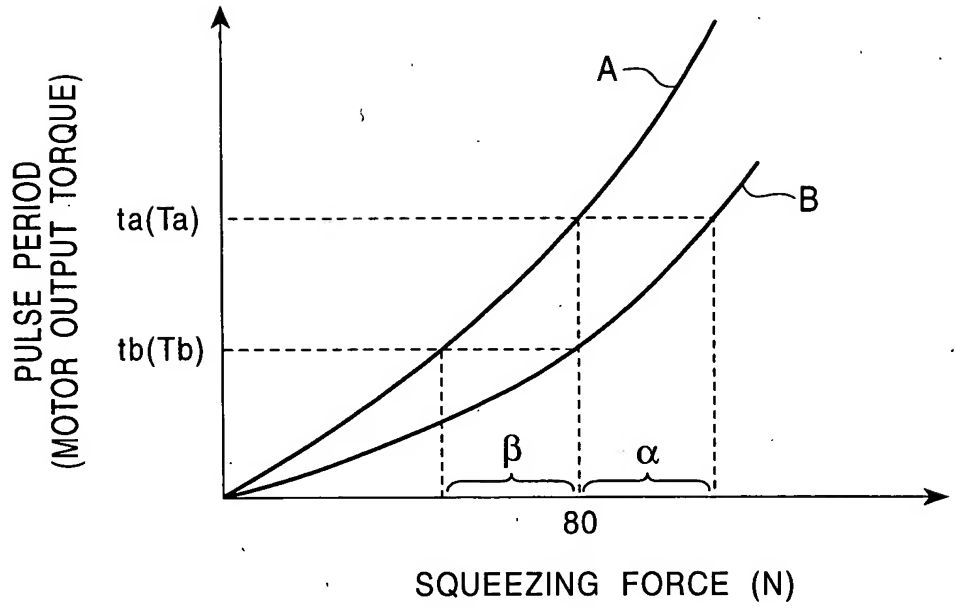
PULSE PERIOD
(MOTOR OUTPUT TORQUE)
A
B
ta(Ta)
tb(Tb)
β
α
80
SQUEEZING FORCE (N)

FIG. 3

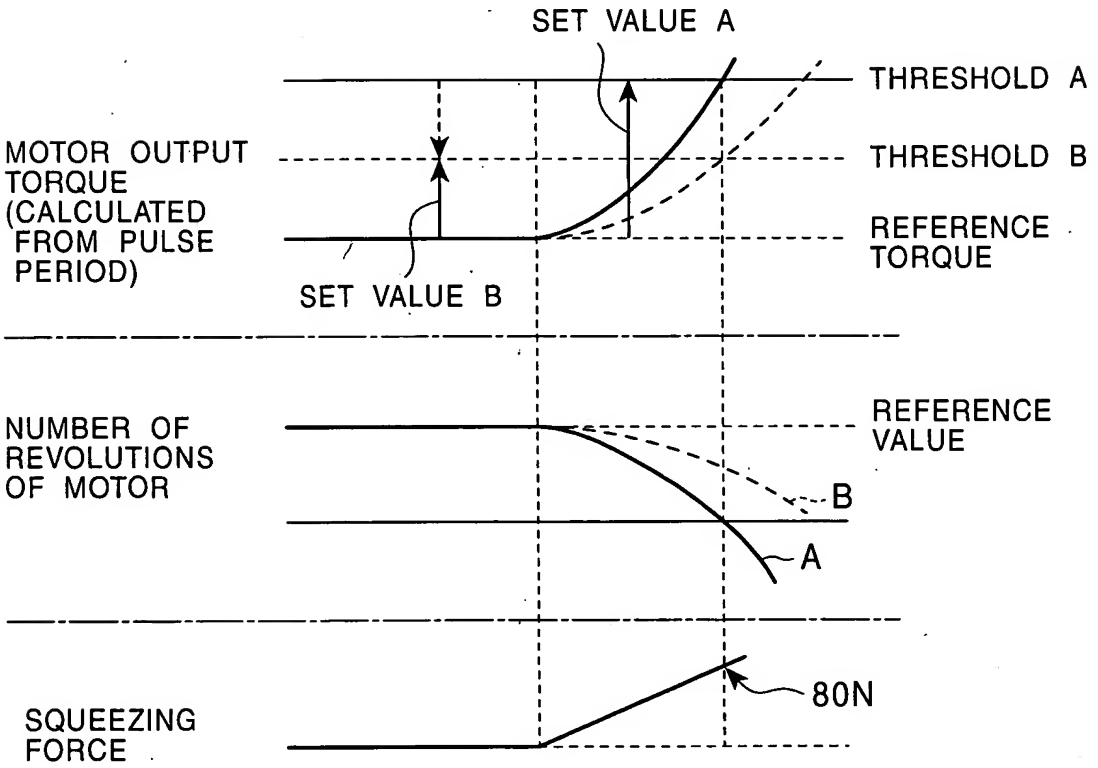
SET VALUE A
THRESHOLD A
MOTOR OUTPUT TORQUE (CALCULATED FROM PULSE PERIOD)
THRESHOLD B
REFERENCE TORQUE
SET VALUE B
NUMBER OF REVOLUTIONS OF MOTOR
REFERENCE VALUE
B
A
SQUEEZING FORCE
80N

FIG. 4A

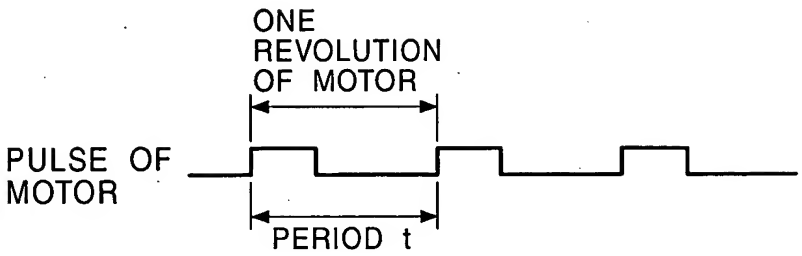

FIG. 4B

$$\tau = \frac{Kt}{Rm}(V - Ke \cdot 1/t) - Tm$$
$$= Kt\ I - Tm$$

1/t: PULSE FREQUENCY

Kt, Rm, Ke, Tm: CONSTANT OF MOTOR